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Applicant : Shikha Barman et al.
Serial No. : 09/872,836
Filed : June 1, 2001
Title : DELIVERY SYSTEMS FOR BIOACTIVE AGENTS

Art Unit : Unknown
Examiner : Unknown

Attention: Official Draftsman
Commissioner for Patents
Washington, D.C. 20231

TRANSMITTAL OF FORMAL DRAWINGS

Please substitute the enclosed seventeen (17) sheets of formal drawings for the corresponding drawings presently in the application.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: May 9, 2002

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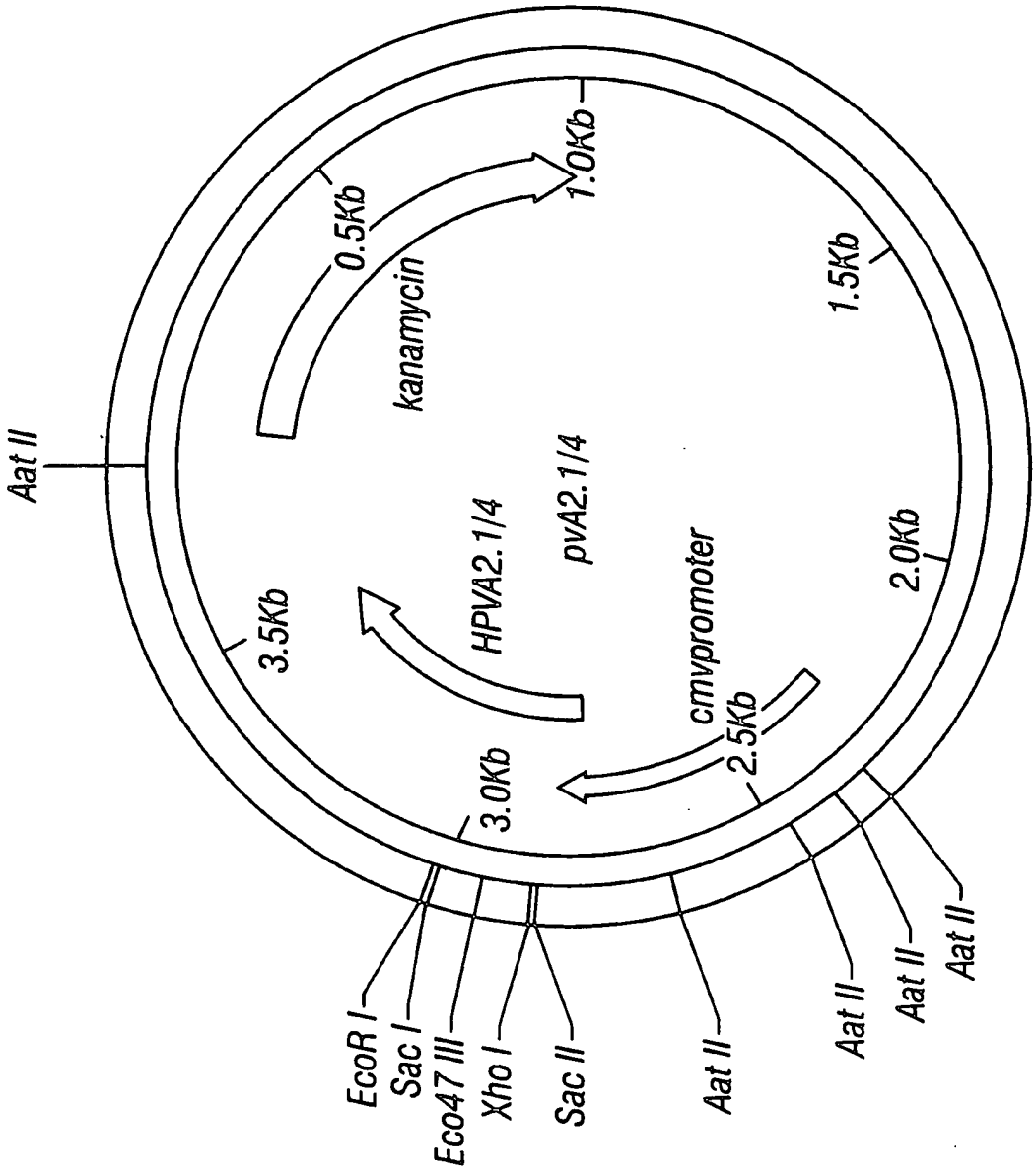

Aat II
0.5Kb
kanamycin
1.0Kb
1.5Kb
pvA2.1/4
HPVA2.1/4
cmvpromoter
2.0Kb
3.5Kb
2.5Kb
3.0Kb
EcoR I
Sac I
Eco47 III
Xho I
Sac II
Aat II
Aat II
Aat II
Aat II

FIG. 1A

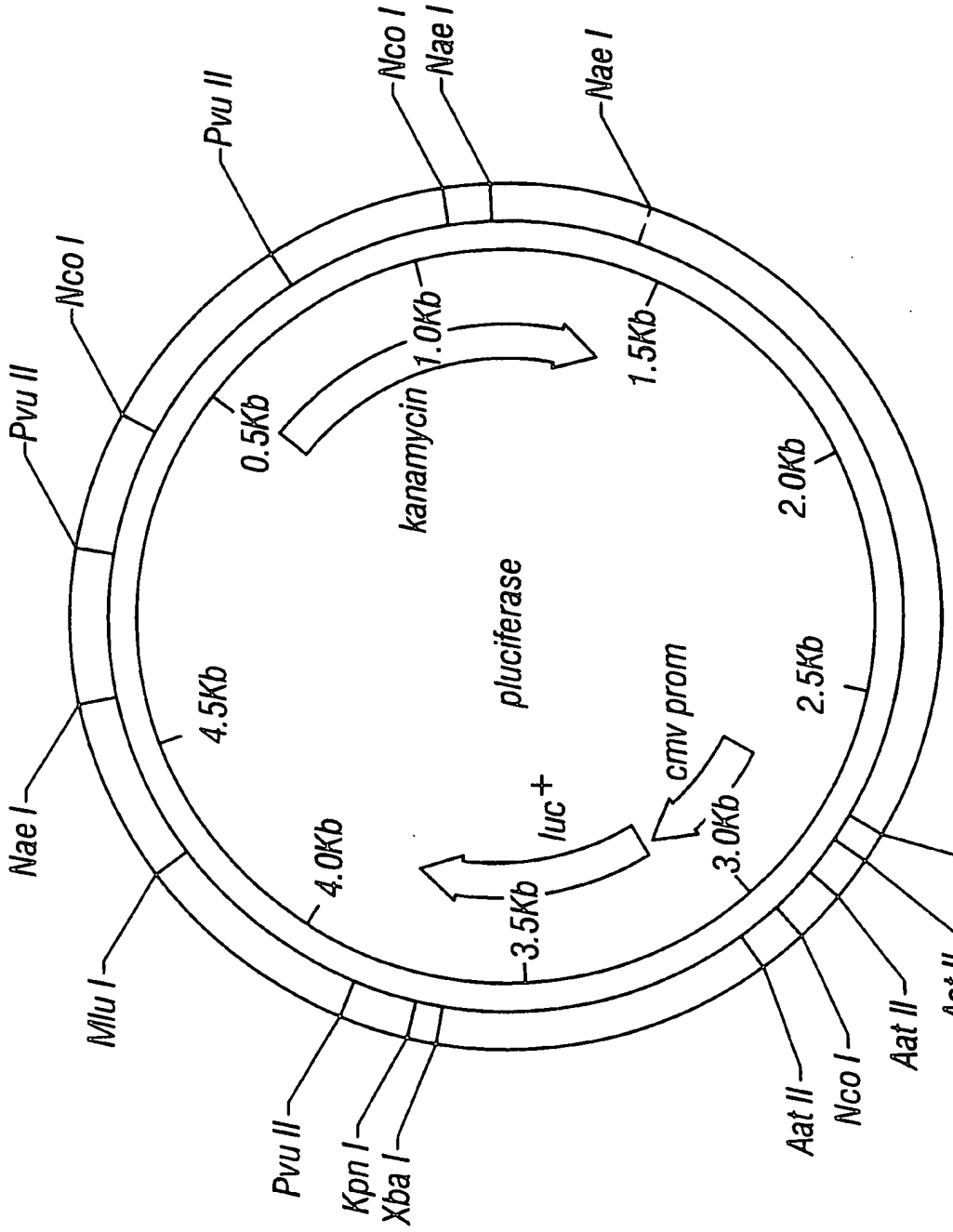

Pvu II
Nco I
Nae I
Nae I
Pvu II
Nco I
1.0Kb
1.5Kb
0.5Kb
kanamycin
2.0Kb
pluciferase
4.5Kb
2.5Kb
cmv prom
luc+
4.0Kb
3.0Kb
3.5Kb
Nae I
Mlu I
Pvu II
Kpn I
Xba I
Aat II
Nco I
Aat II
Aat II
Aat II

FIG. 1B

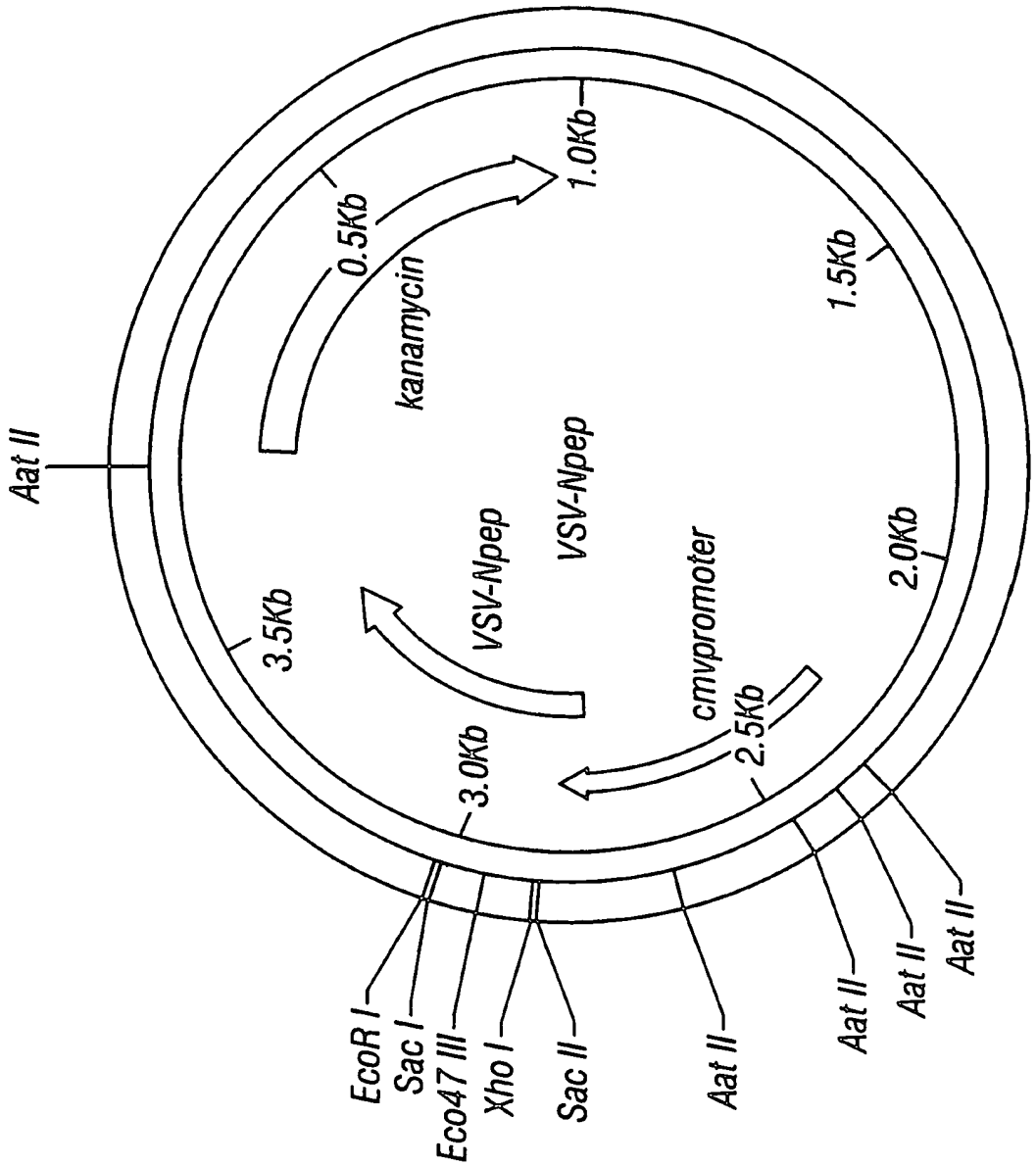

Aat II
0.5Kb
kanamycin
1.0Kb
1.5Kb
VSV-Npep
VSV-Npep
cmvpromoter
3.5Kb
2.0Kb
3.0Kb
2.5Kb
EcoR I
Sac I
Eco47 III
Xho I
Sac II
Aat II
Aat II
Aat II
Aat II

FIG. 1C

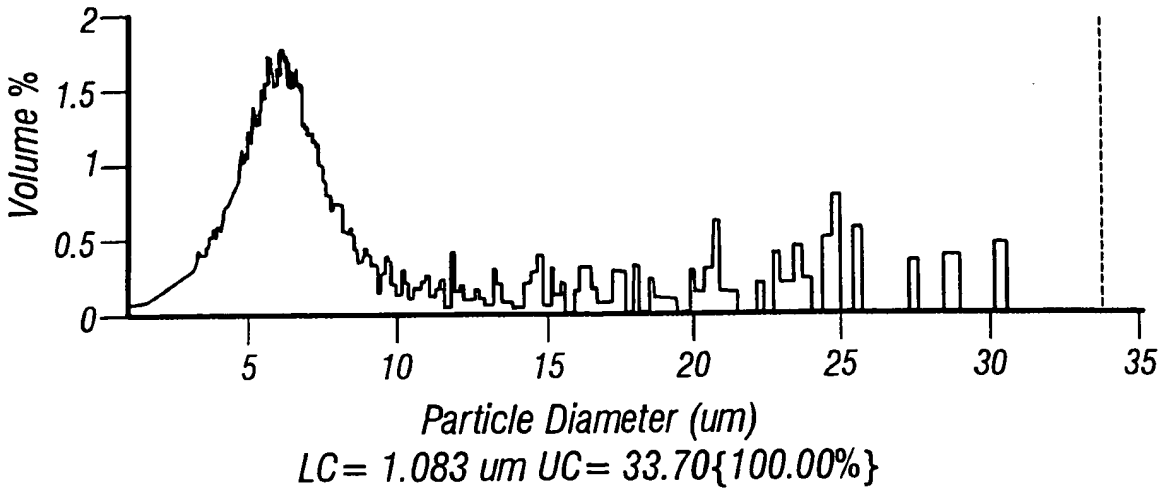


FIG. 2

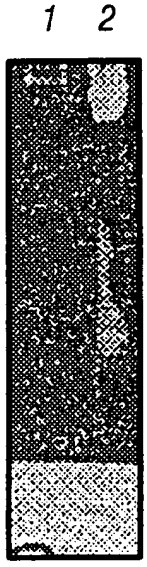


FIG. 3A

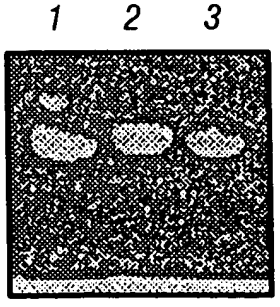


FIG. 3B

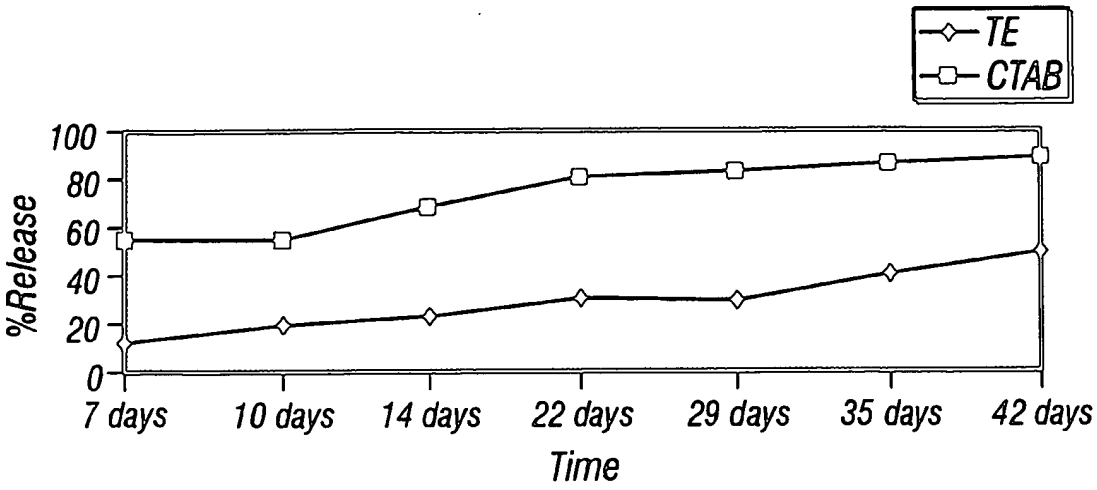

TE
CTAB
100
80
60
40
20
0
%Release
7 days
10 days
14 days
22 days
29 days
35 days
42 days
Time

FIG. 4

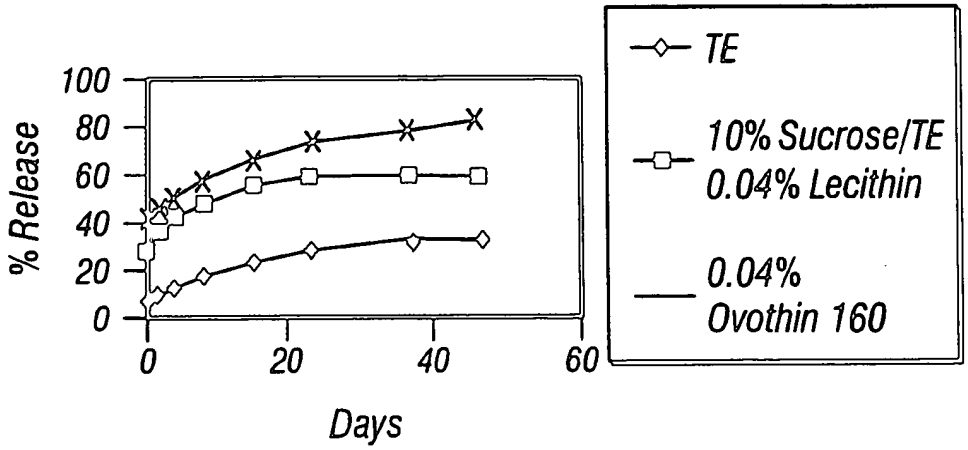

TE
10% Sucrose/TE
0.04% Lecithin
0.04%
Ovothin 160
100
80
60
40
20
0
% Release
0
20
40
60
Days

FIG. 5

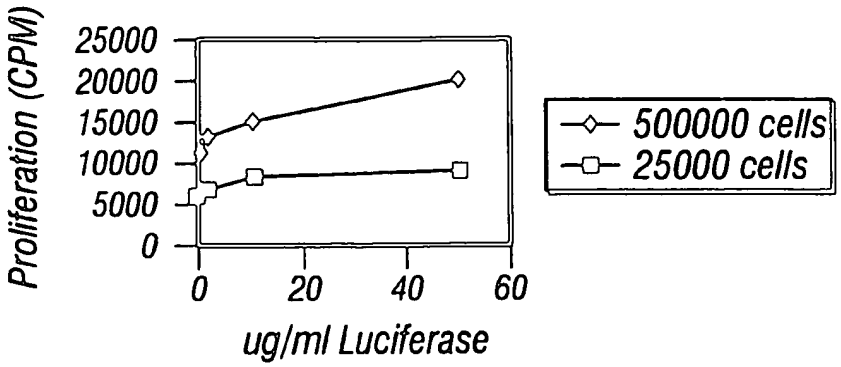

Proliferation (CPM)
25000
20000
15000
10000
5000
0
0
20
40
60
ug/ml Luciferase
500000 cells
25000 cells

FIG. 6

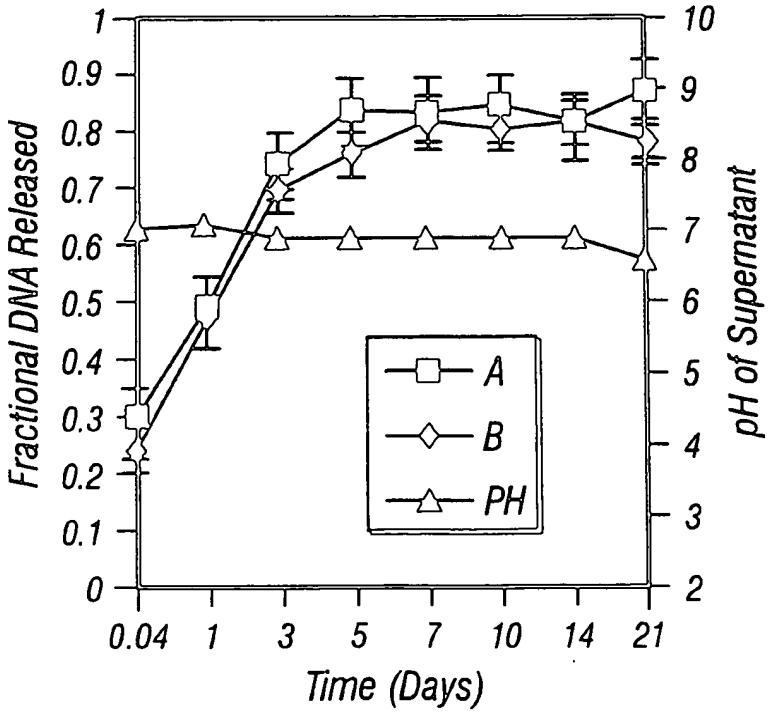

Fractional DNA Released
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
pH of Supernatant
10
9
8
7
6
5
4
3
2
0.04
1
3
5
7
10
14
21
Time (Days)
A
B
PH

FIG. 7

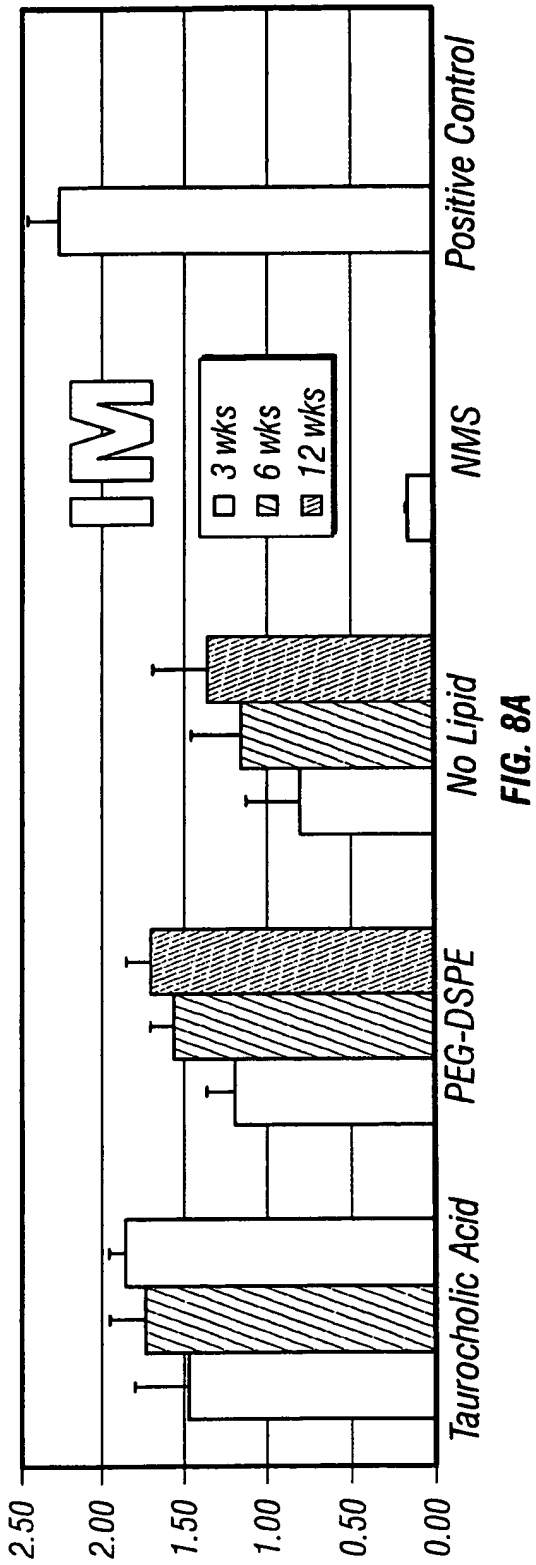

IM
3 wks
6 wks
12 wks
OD @ 405 nm
2.50
2.00
1.50
1.00
0.50
0.00
Taurocholic Acid
PEG-DSPE
No Lipid
NMS
Positive Control

FIG. 8A

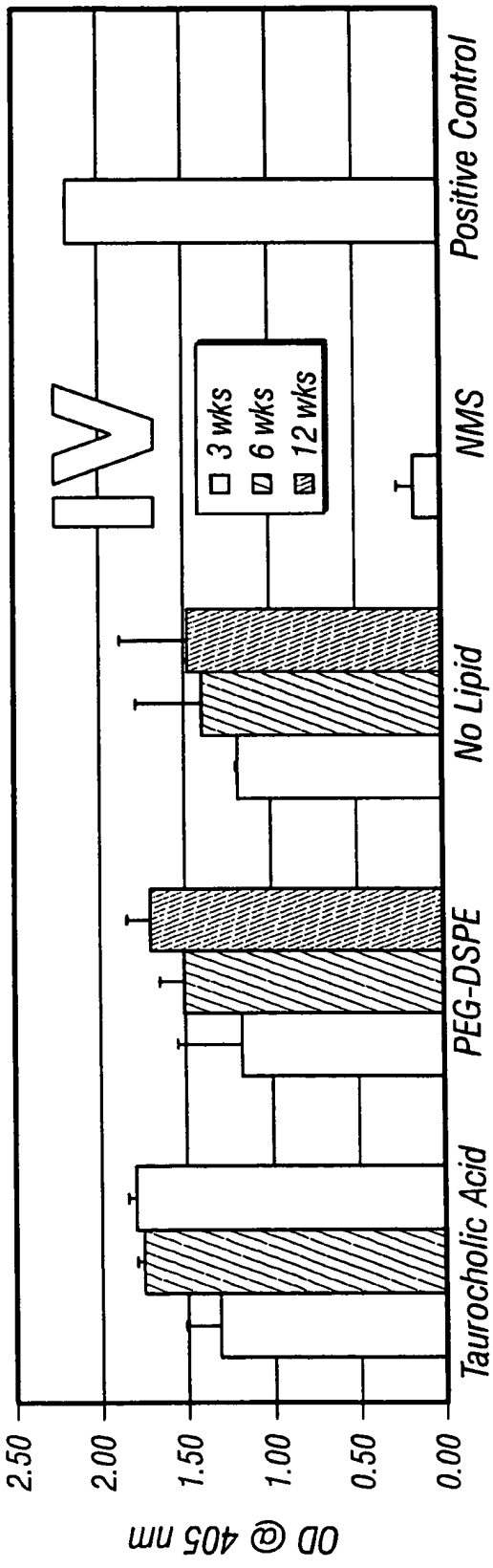

IV
3 wks
6 wks
12 wks
OD @ 405 nm
2.50
2.00
1.50
1.00
0.50
0.00
Taurocholic Acid
PEG-DSPE
No Lipid
NMS
Positive Control

FIG. 8B

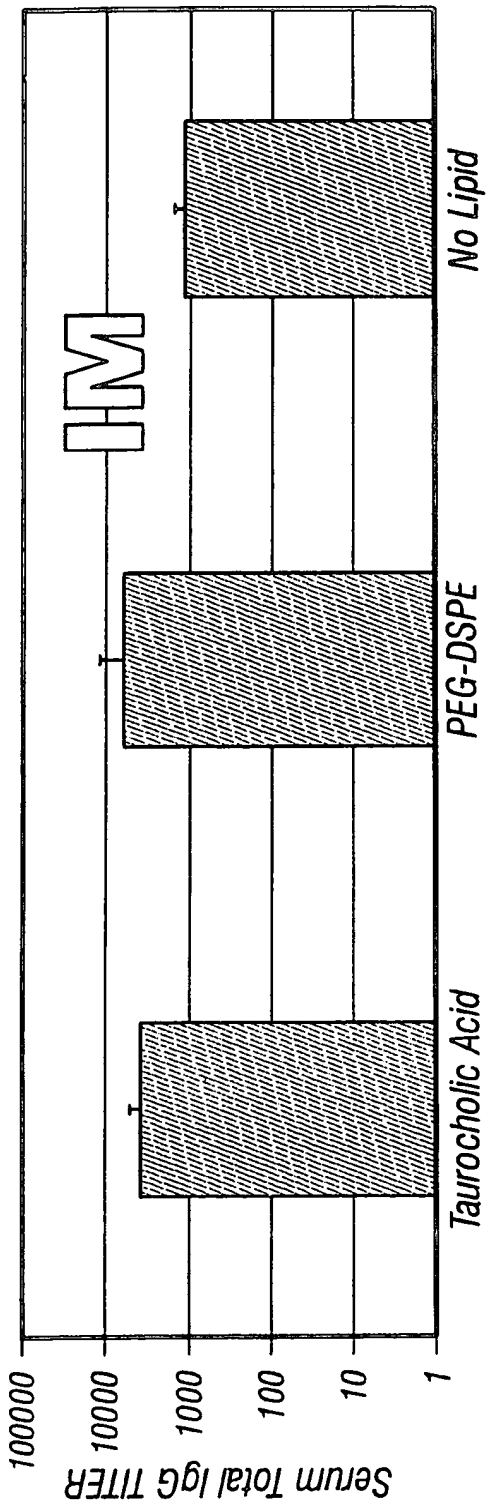

IM
Serum Total IgG TITER
100000
10000
1000
100
10
1
Taurocholic Acid
PEG-DSPE
No Lipid

FIG. 9A

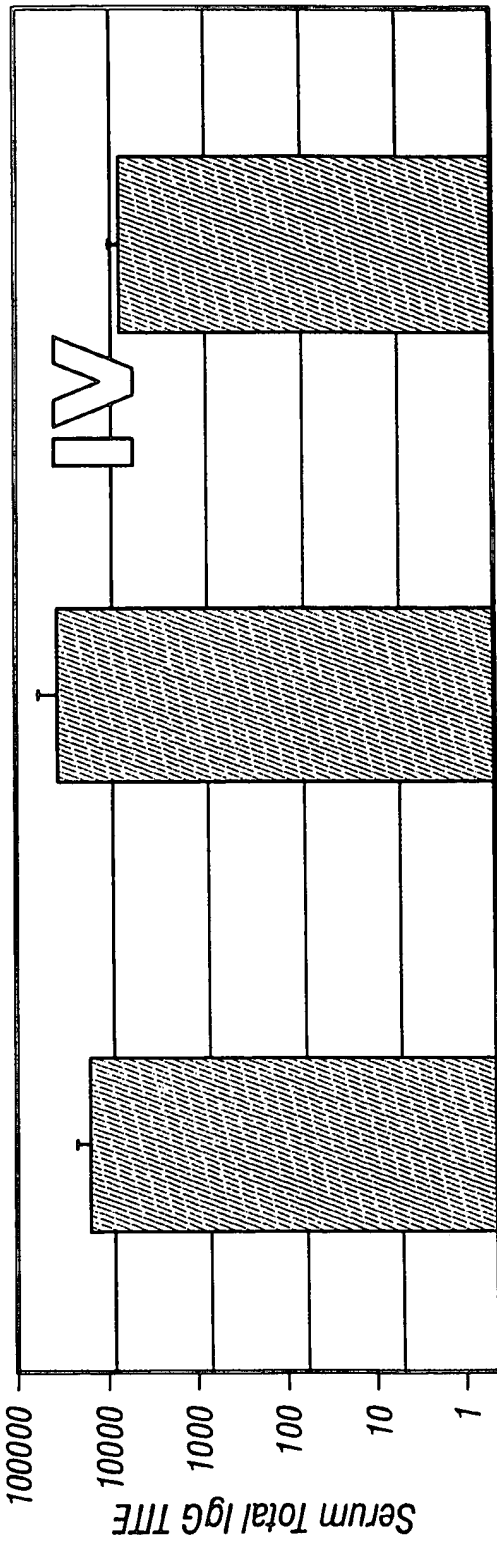

IV
Serum Total IgG TITE
100000
10000
1000
100
10
1
Taurocholic Acid
PEG-DSPE
No Lipid

FIG. 9B

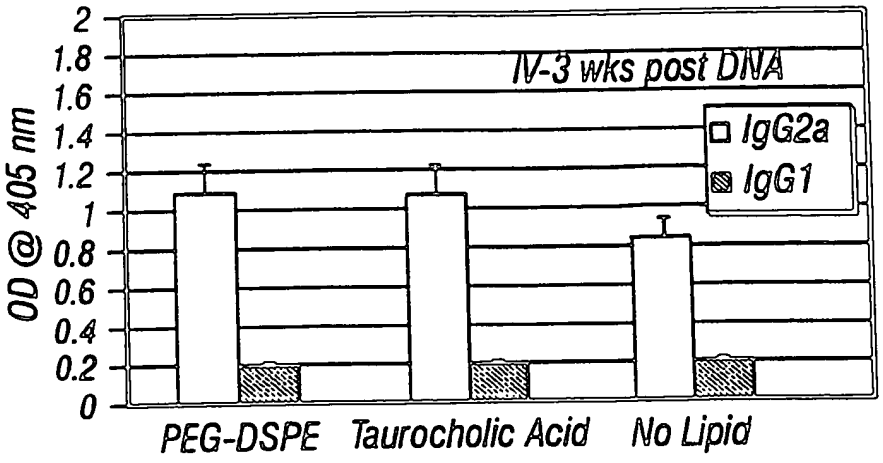


FIG. 10A

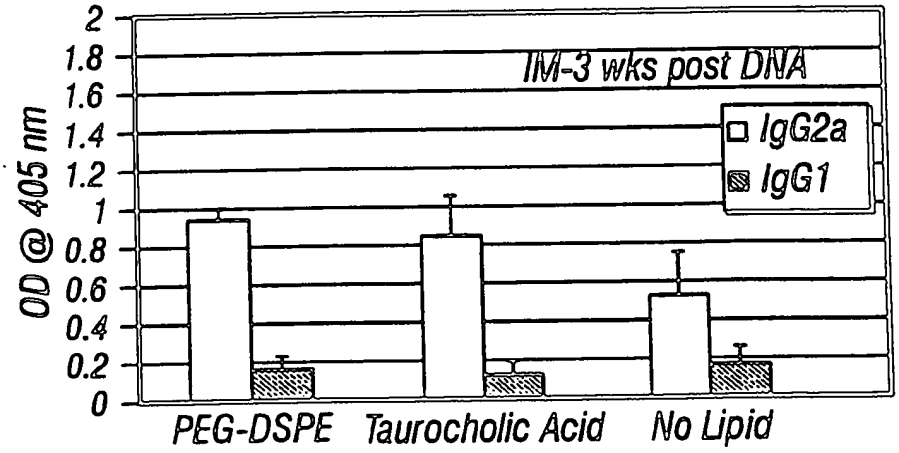


FIG. 10B

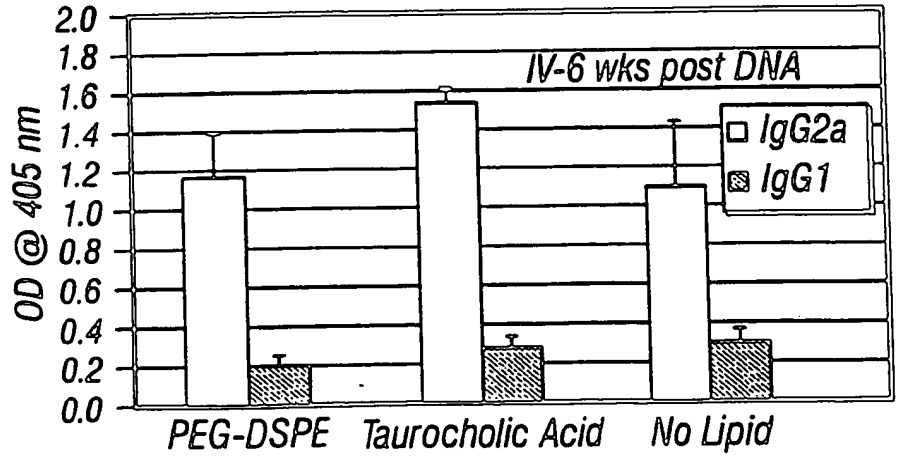


FIG. 10C

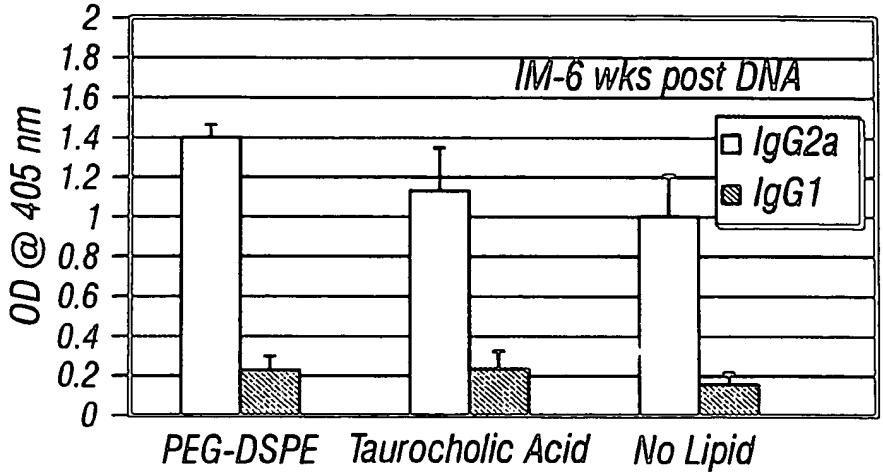


FIG. 10D

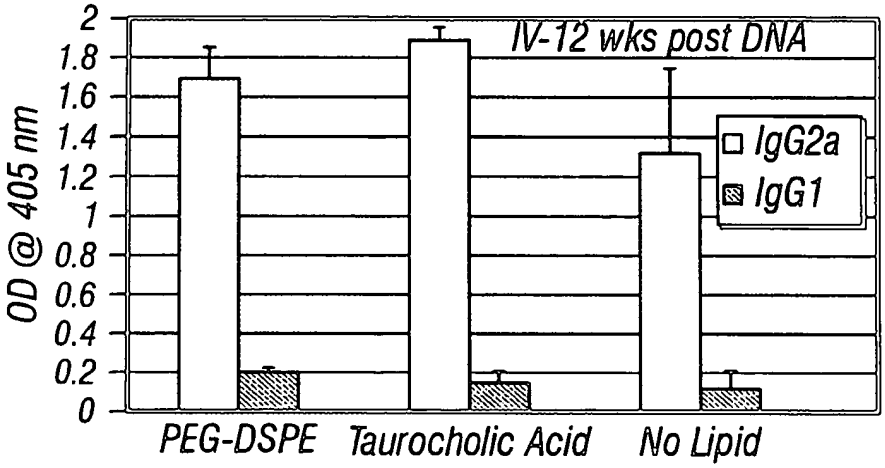


FIG. 10E

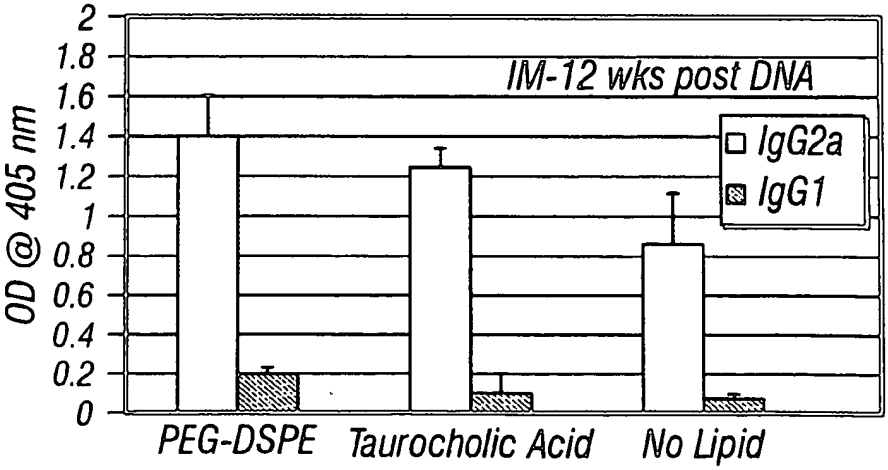


FIG. 10F

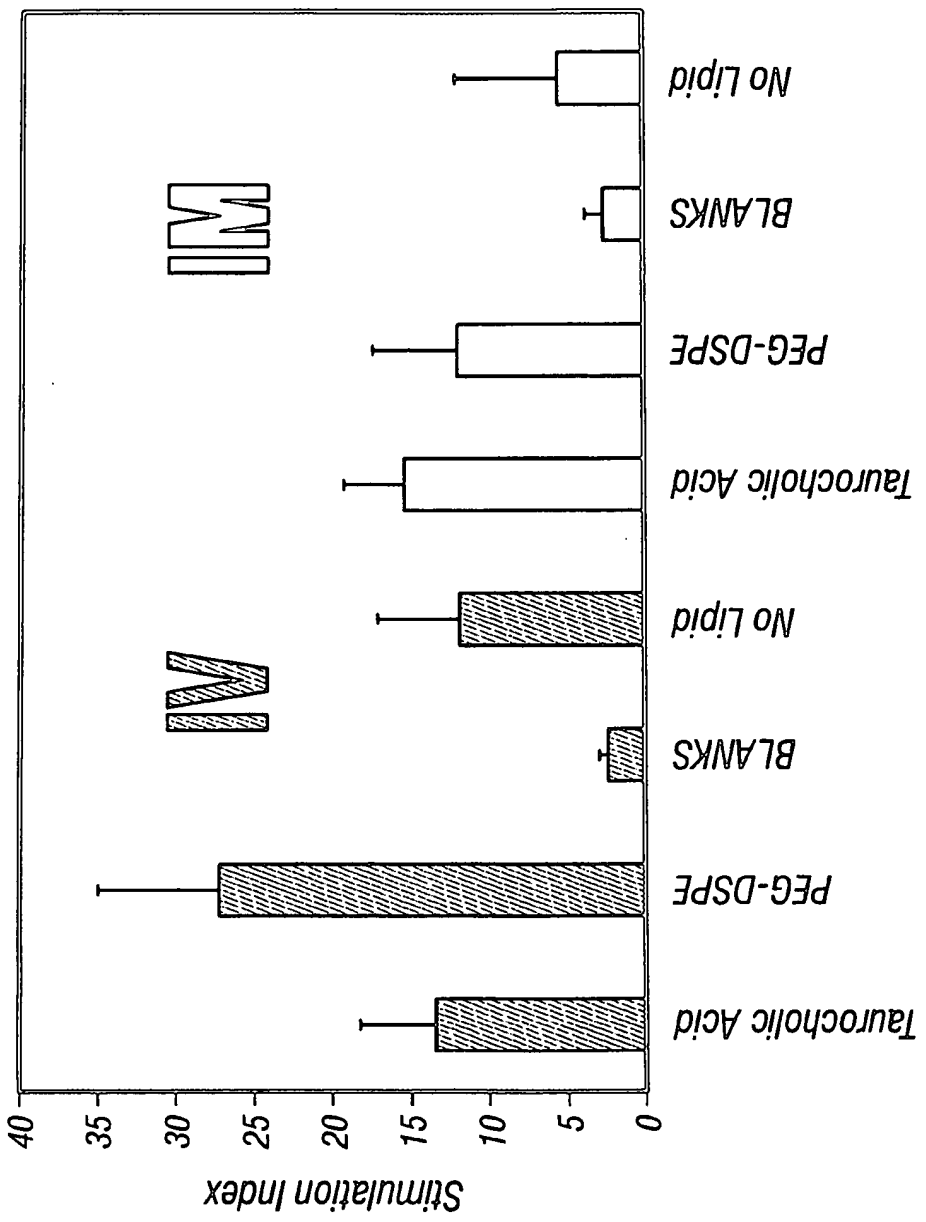

Stimulation Index
0
5
10
15
20
25
30
35
40
M
M
Taurocholic Acid
PEG-DSPE
BLANKS
No Lipid
Taurocholic Acid
PEG-DSPE
BLANKS
No Lipid

FIG. 11

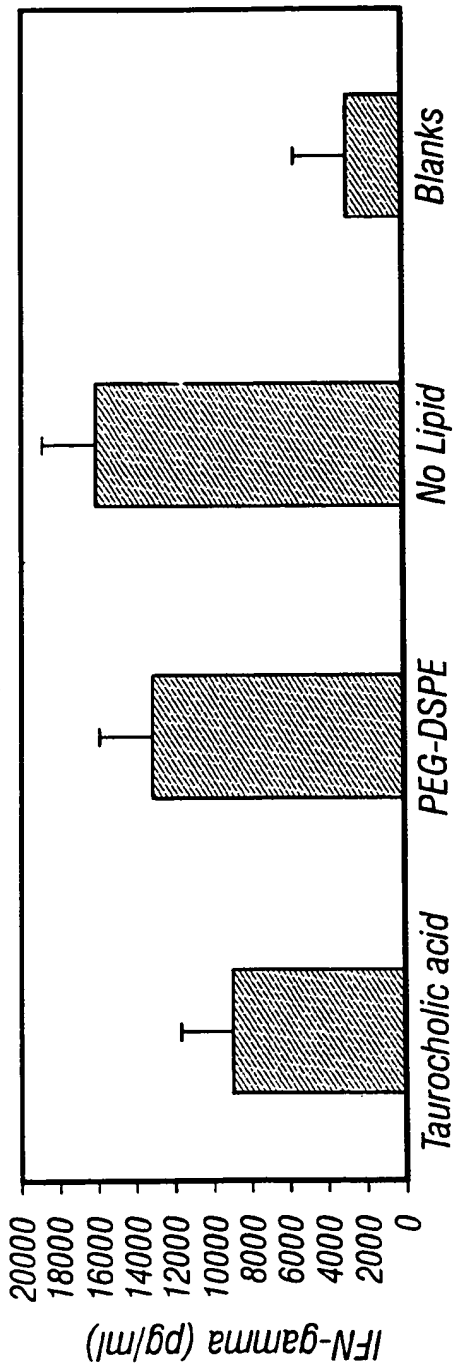


FIG. 12A

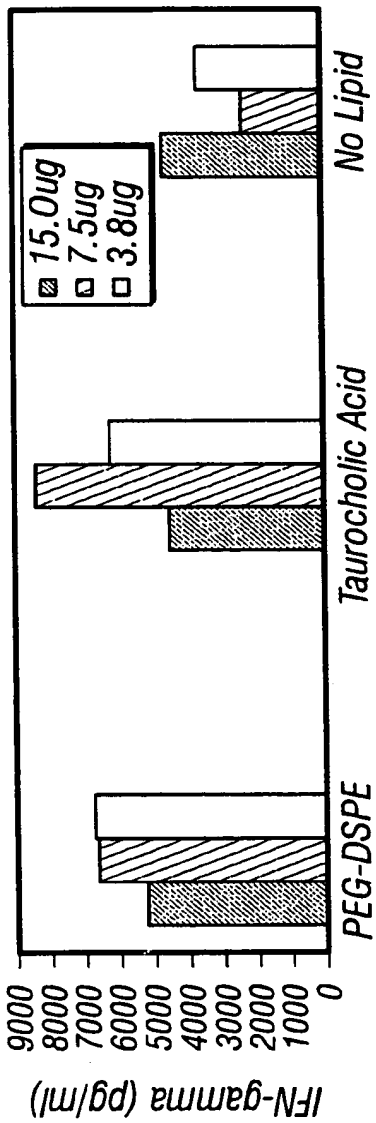


FIG. 12B



FIG. 13A

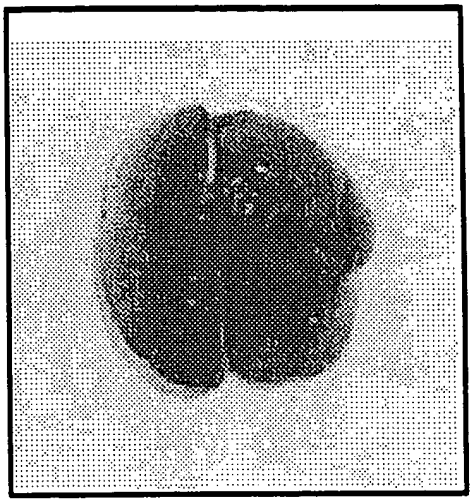
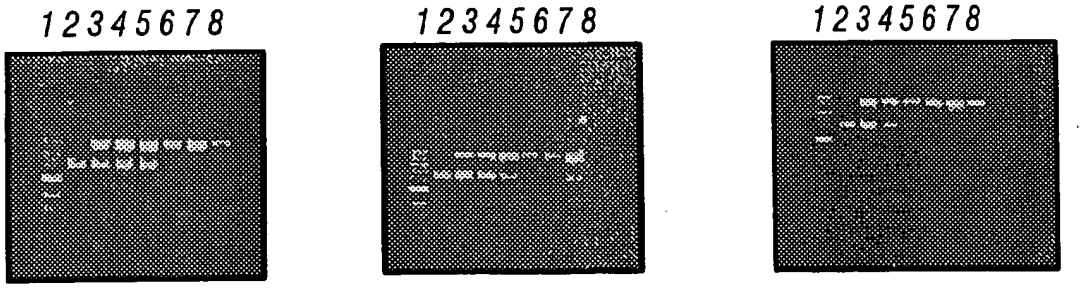
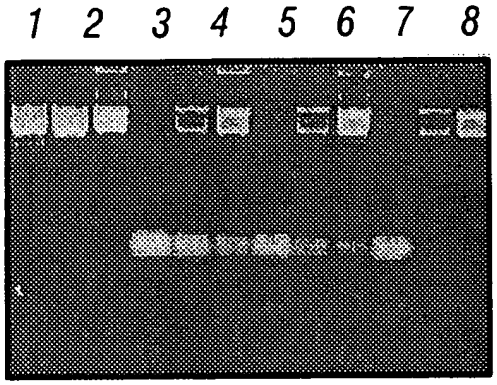


FIG. 13B



Lane 1 : 1 Kb Marker, 2=250 ng Input DNA
3=1.5 h, 4=1d, 5=3d, 6=8d, 7=15d, 8=21d

FIG. 14



- *Naked DNA*
- *Mp-DNA (no lipid)*
- *Mp-PEG-DSPE-DNA*
- *Naked DNA, 30 min*
- *Mp-DNA, 30 min (no lipid)*
- *Mp-PEG-DSPE-DNA, 30 min*
- *Naked DNA, 1 hr*
- *Mp-DNA, 1 hr (no lipid)*
- *Mp-PEG-DSPE-DNA, 1 hr*
- *Naked DNA, 2 hrs*
- *Mp-DNA, 2 hrs (no lipid)*
- *Mp-PEG-DSPE-DNA, 2 hrs*

FIG. 15



FIG. 16

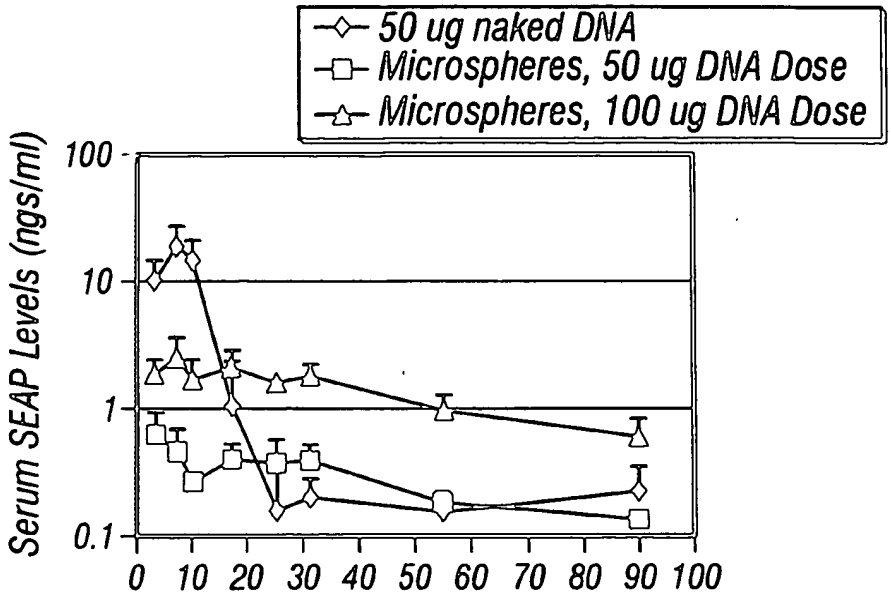


FIG. 17A

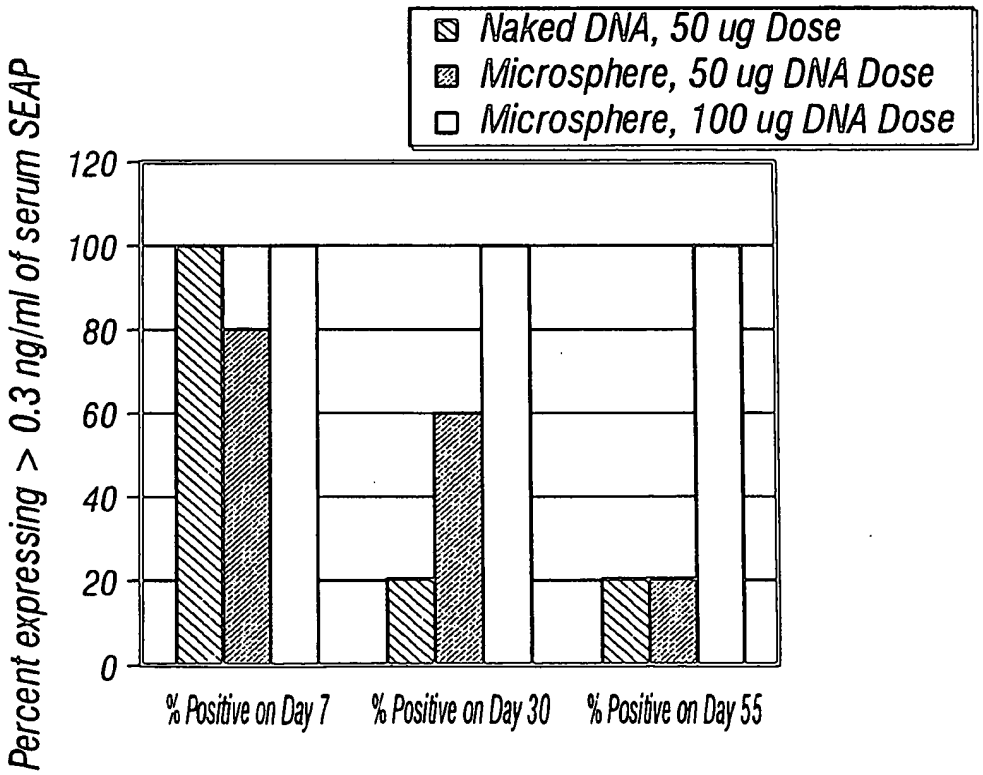


FIG. 17B

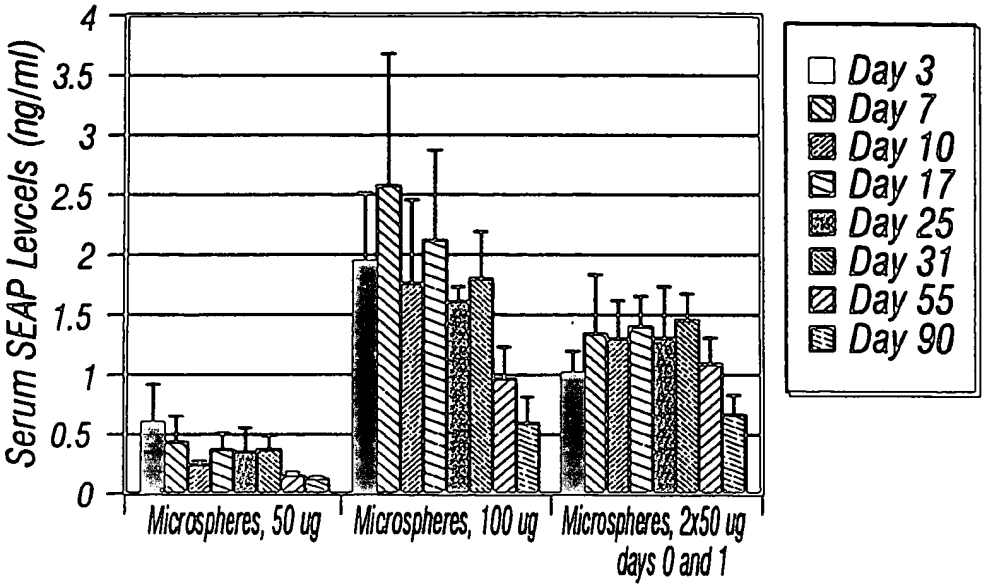

Serum SEAP Levcels (ng/ml)
4
3.5
3
2.5
2
1.5
1
0.5
0
Day 3
Day 7
Day 10
Day 17
Day 25
Day 31
Day 55
Day 90
Microspheres, 50 ug
Microspheres, 100 ug
Microspheres, 2x50 ug
days 0 and 1

FIG. 18

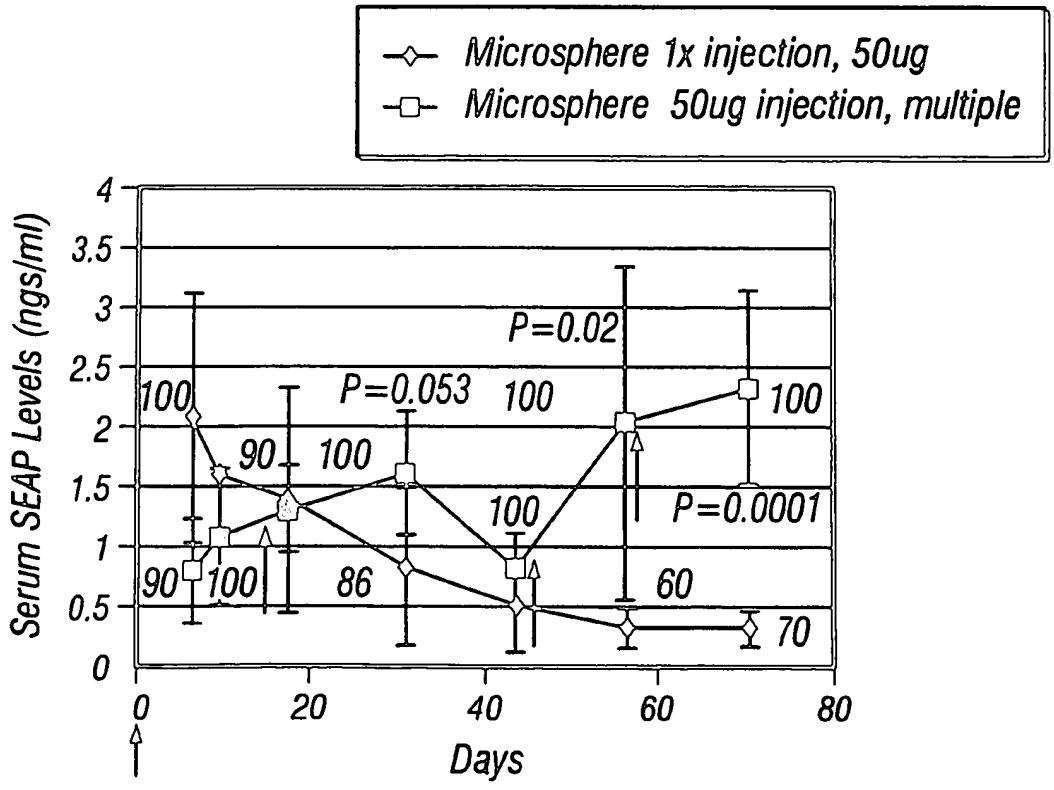

Microsphere 1x injection, 50ug
Microsphere 50ug injection, multiple
Serum SEAP Levels (ngs/ml)
4
3.5
3
2.5
2
1.5
1
0.5
0
P=0.02
P=0.053
P=0.0001
100
90
100
100
100
100
90
100
86
60
70
0
20
40
60
80
Days

FIG. 19

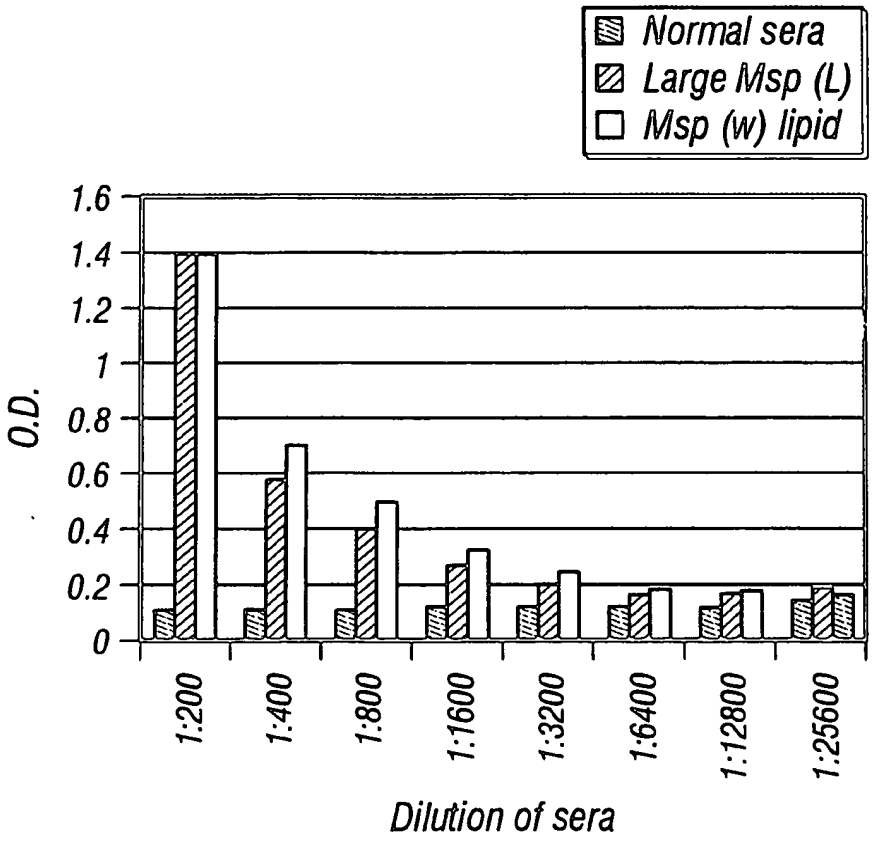

Normal sera
Large Msp (L)
Msp (w) lipid
O.D.
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1:200
1:400
1:800
1:1600
1:3200
1:6400
1:12800
1:25600
Dilution of sera

FIG. 20